

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* TONG SUN and JEFF LINDSAY

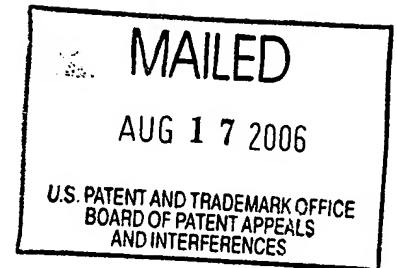
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Appeal No. 2006-2004  
Application 10/022,823

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ON BRIEF

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Before WARREN, KRATZ and GAUDETTE, *Administrative Patent Judges*.

WARREN, *Administrative Patent Judge*.

*Decision on Appeal*

This is an appeal under 35 U.S.C. § 134 from the decision of the examiner finally rejecting claims 16 through 28 and 32. Claims 29 through 31 are also of record and have been withdrawn from consideration by the examiner under 37 CFR § 1.142(b).

Claim 16 illustrates appellants' invention of a dyed textile material, and is representative of the claims on appeal:

16. A dyed textile material comprising:

a textile material containing a cellulosic material, said cellulosic material being treated with a polyvinylamine and a complexing agent, the complexing agent serving to bond the polyvinylamine to the cellulosic material; and

an acid dye applied to said cellulosic material.

The references relied on by the examiner in the grounds of rejection under 35 U.S.C.

§ 103(a) are:

Evani et al. (Evani)	4,242,408	Dec. 30, 1980
Schrell et al. (Schrell)	5,529,585	Jun. 25, 1996
Takahashi et al. (Takahashi) <sup>1</sup> (published Japanese Patent Application)	02-127593	May 16, 1990
Geer et al. (Geer) (published World Intellectual Property Organization Application)	WO 00/11406	Mar. 2, 2000

The examiner has advanced the following grounds of rejection on appeal:

claims 16 through 18 and 32 stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 through 45 of copending Application 10/023,489;<sup>2</sup>

claims 16 through 18, 20 through 23, 26 through 28 and 32 stand rejected under 35 U.S.C. § 103(a) as being obvious over Schrell in view of Evani (answer, pages 3-4);

claims 24 and 25 stand rejected under 35 U.S.C. § 103(a) as being obvious over Schrell in view of Evani as applied to claims 16 through 18, 20 through 23, 26 through 28 above and further in view of Takahashi (answer, page 4);

claims 16, 17, 19, 20 22, 23, 26 through 28 and 32 stand rejected under 35 U.S.C. § 103(a) as being obvious over Schrell in view of Geer (answer, page 4); and

claims 24 and 25 stand rejected under 35 U.S.C. § 103(a) as being obvious over Schrell in view of Geer as applied to claims 16, 17, 19, 20 22, 23, 26 through 28 and 32 above and further in view of Takahashi (answer, page 5).

Appellants argue claims as a group with respect to the grounds of rejection in the brief and reply brief. Thus, we decide this appeal based on appealed claims 16 and 24 as representative of the grounds of rejection and appellants' groupings of claims. 37 CFR § 41.37(c)(1)(vii) (September 2004).

In the interest of judicial economy and the pendency of this application, we reverse the grounds of rejection under 35 U.S.C. § 103(a) and remand the application for further consideration of the ground of rejection under the judicially created doctrine of obviousness-type-double patenting under 37 CFR §41.50(a)(1) (2005). Accordingly, we reverse

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<sup>1</sup> We refer to the translation of Takahashi prepared for the USPTO by FLS, Inc. (May 2005). (Japanese Kokai Pat. Publication)

<sup>2</sup> We have stated the ground of rejection using the application number stated in the final action mailed June 22, 2004 (page 2).

the decision of the examiner and remand the application.

We refer to the answer and to the brief and reply brief for a complete exposition of the positions advanced by the examiner and appellants.

*Opinion*

The principal issue in this appeal involves the product-by-process claim language of independent claim 16 specifying that any cellulosic material contained by any manner of textile material is “treated” in any manner with any amount of any polyvinylamine and any amount of a complexing agent such that some amount of complexing agent bonds some amount of polyvinylamine to the cellulosic material. Dependent claim 24 further modifies claim 16 by requiring the textile material to further contain nitrogen containing natural or synthetic fibers. *See, e.g., In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364, 70 USPQ2d 1827, 1830 (Fed. Cir. 2004); *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997); *In re Zletz*, 893 F.2d 319, 321-22, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989).

In order to establish a *prima facie* case of obviousness of claims 16 and 24 under § 103(a), the examiner must show that some objective teaching, suggestion or motivation in the applied prior art taken as a whole and/or knowledge generally available to one of ordinary skill in this art would have led that person to the claimed invention as a whole, including each and every limitation of the claim arranged as required by the claims, without recourse to the teachings in appellants’ disclosure. *See generally, In re Kahn*, 441 F.3d 977, 985-88, 78 USPQ2d 1329, 1334-37 (Fed. Cir. 2006); *In re Lee*, 277 F.3d 1338, 1343, 61 USPQ2d 1430, 1433-34 (Fed. Cir. 2002); *In re Rouffet*, 149 F.3d 1350, 1358, 47 USPQ2d 1453, 1458 (Fed. Cir. 1998); *Pro-Mold and Tool Co. v. Great Lakes Plastics, Inc.*, 75 F.3d 1568, 1573, 37 USPQ2d 1626, 1629-30 (Fed. Cir. 1996); *In re Fritch*, 972 F.2d 1260, 1265-66, 23 USPQ2d 1780, 1783-84 (Fed. Cir. 1992); *In re Fine*, 837 F.2d 1071, 1074-76, 5 USPQ2d 1596, 1598-1600 (Fed. Cir. 1988); *In re Dow Chem. Co.*, 837 F.2d 469, 473, 5 USPQ2d 1529, 1531 (Fed. Cir. 1988).

The principal issues raised in these grounds of rejection are whether one of ordinary skill in this art would have found in the combined teachings of Schrell with Evani and with Geer the suggestion to treat the textile fibers of Schrell, which contain an occluded polyvinylamine, with the pH sensitive binders of Evani and with the polymers of Geer in the reasonable expectation of

enhancing the strength of the fibers of Schrell, and in such manner as to further reasonably appear to bond the polyvinylamine contained by the fibers of Schrell to the cellulosic material of the fibers (answer, pages 3-4 and 4). There is no dispute that the pH sensitive binder of Evani and the anionic polymers of Geer are complexing agents falling within claim 16, which more specifically are polymeric anionic reactive compounds and polymeric aldehyde functional compounds falling within claims 18 and 19, respectively.

Appellants submit that one of ordinary skill in the art would not have been motivated to treat the cellulosic material containing textile fibers of Schrell with the complexing agents of Evani and Geer which are used in paper making, and even if this person would have applied the complexing agents to Schrell's textile fibers containing a polyvinylamine, there is no expectation that the complexing agents would bond the polyvinylamine to the cellulosic material of the textile fibers as required by claim 16 (brief, e.g., pages 6, 7, 9 and 10; reply brief, e.g., pages 4-5). The examiner maintains that Evani and Geer provide the motivation to use the complexing agents by teaching that strength and disposability are enhanced, and since Schrell treats cellulosic material with a polyvinylamine and a complexing agent of Evani or Geer is used to treat such fibers, "it is reasonable to presume that the complexing agent would function in the same way as it does in the instant claims, since all the claim limitations would be met" (answer, pages 6-7). In this latter respect, the examiner contends that "the claims recite that the cellulosic material is 'treated' with the polyvinylamine, but do not specify what is meant by treatment, i.e., coating, incorporating into the material which makes up the cellulosic fibers themselves, etc." (*id.*, page 7).

We find that Schrell would have disclosed to one of ordinary skill in this art that the polyvinylamines disclosed therein are used to modify cellulosic fibers by addition to the cellulose and viscose solutions and spinning the modified cellulosic fibers from the solutions, the polyvinylamine modifiers remaining "occluded in the fibers and are not washed out in the course of the subsequent" processing which is necessary to obtain fibers with improved dyeing properties (e.g., col. 1, l. 58, to col. 3, l. 64; Schrell Examples 1 and 2). Schrell would have further disclosed that the modified cellulosic fibers are "processed into woven and knitted fabrics" which are dyed with, among others, acid dyes (e.g., col. 3, l. 65, to col. 4, l. 61).

We further find that Evani would have disclosed that a pH sensitive binder is disposed between the fibers of a non-woven web such that “the individual fibers of the mat [*sic*, web] are adhered to each other” by the binder to enhance “wet strength and easy disposability,” wherein the fibers can be natural and synthetic fibers such as cellulosic fibers, especially paper (e.g., col. 1, l. 53, to col. 2, l. 10). Geer would have disclosed anionic or amphoteric polymers which are reactive with paper pulp fibers, wherein a cationic adjunct or co-additive is usually necessary to retain the anionic polymers on the anionic fiber surfaces and can be used to retain the amphoteric polymers on such surfaces, and provide paper with improved dry strength and temporary wet strength (e.g., page 9, l. 6, to page 10, l. 12).

We find that, as the examiner contends, one of ordinary skill in this art would have recognized from the teachings of Evani and of Geer that the binder and polymers disclosed therein would bind the cellulosic material of any fibers, increasing the strength of the treated nonwoven web or paper. However, we determine that this fact alone is not sufficient motivation to combine the teachings of each of these references with Schrell. As appellants argue, the examiner ignores the fact that the modified fibers containing occluded polyvinylamine of Schrell are used for textiles, including woven textiles, and thus the examiner has not explained on this record why one of ordinary skill in this art would have treated the modified fibers of Schrell with the binders and polymers of Evani and Geer. Indeed, we find no teaching in the references as combined which would have suggested to one of ordinary skill in this art that the modified fibers of Schrell should be further bonded together when formed into textile materials to increase the strength of the textile materials by using additional agents employed with other cellulosic materials to obtain different products. “The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification.” *In re Fritch*, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1783-84 (Fed. Cir. 1992).

Further, the examiner has not established that if one of ordinary skill in the art would have treated the modified fibers containing occluded polyvinylamine of Schrell with the binders and polymers of Evani and Geer, it would reasonably appear that the binders and polymers would

bond the occluded polyvinylamines to the textile fibers containing the same as required by claim 16. *See, e.g., In re Best*, 562 F.2d 1252, 1255-56, 195 USPQ 430, 433-34 (CCPA 1977).

Thus, on this record, we determine that the examiner has not established a *prima facie* case of obviousness of the claimed invention encompassed by claim 16 over the combined teachings of Schrell with Evani and with Greer, and we further find no teaching in Takahashi which would further establish such a case with respect to the claimed invention encompassed by claim 24. Accordingly, we reverse the grounds of rejection based on 35 U.S.C. § 103(a). *See generally, Rouffet*, 149 F.3d at 1358, 47 USPQ2d at 1458 (“hindsight” is inferred when the specific understanding or principal within the knowledge of one of ordinary skill in the art leading to the modification of the prior art in order to arrive at appellant’s claimed invention has not been explained); *Dow Chem.*, 837 F.2d at 473, 5 USPQ2d at 1531 (“The consistent criterion for determination of obviousness is whether the prior art would have suggested to one of ordinary skill in the art that [the claimed process] should be carried out and would have a reasonable likelihood of success viewed in light of the prior art. [Citations omitted] Both the suggestion and the expectation of success must be founded in the prior art, not in the applicant’s disclosure.”).

The examiner’s decision is reversed.

#### *Remand*

We remand the application to the examiner for consideration of issues raised by the record. 37 CFR § 41.50(a)(1) (2005); Manual of Patent Examining Procedure (MPEP) § 1211 (8th ed., Rev. 3, August 2005).

It is clear that application 10/023,489, containing claims 1 through 45, matured into United States Patent US 6,824,650 B2 issued on November 20, 2004, to Lindsay et al. (Lindsay) containing patent claims 1 through 26. The issue date is prior to the filing of the brief on March 3, 2005, the mailing of the answer on April 29, 2005, and the filing of the reply brief on June 29, 2005, and the mailing of the communication entering the reply brief on September 12, 2005.

Accordingly, the examiner is required to take appropriate action consistent with current examining practice and procedure to consider whether a new ground or grounds of rejection of one or more of the pending claims in this application under the judicially created doctrine of

obviousness-type double patenting as being unpatentable over any of patent claims 1 through 26 of Lindsay should be entered on the record.

We hereby remand this application to the examiner, via the Office of a Director of the Technology Center, for appropriate action in view of the above comments.

This application, by virtue of its “special” status, requires immediate action. It is important that the Board of Patent Appeals and Interferences be informed promptly of any action affecting the appeal in this case. *See* MPEP § 708.01(D) (8th ed., Rev. 3, August 2005).

REVERSED  
REMANDED

*Benjamin Franklin*

CHARLES F. WARREN  
Administrative Patent Judge

Pete R. King

PETER F. KRATZ  
Administrative Patent Judge

Kinda M. Dandette

LINDA M. GAUDETTE  
Administrative Patent Judge

# BOARD OF PATENT APPEALS AND INTERFERENCES



• Appeal No. 2006-2004  
Application 10/022,823

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